IN THE CLAIMS:

On page 7, line 1, cancel "Patent claims" and substitute –I CLAIM AS MY INVENTION:-- therefor.

Claims 1-4 have been cancelled.

5   1-4. (Cancelled)

Add the following new claims.

5. (New)   A method for correcting pixels of an x-ray image data set, comprising the steps of:

acquiring an x-ray exposure of an examination subject with an x-ray
10   apparatus using a storage film as an x-ray detector, said storage
            film comprising a storage luminophore layer having a sensitivity
            that changes dependent on an accumulated x-ray dose to which
            said storage luminophore is exposed;

reading out said storage film with a readout device after acquiring x-ray
15   exposure;

from the readout of said storage film, generating an x-ray image data
            set corresponding to said x-ray exposure, said x-ray image data
            set comprising a plurality of data set pixels respectively
            corresponding to pixels of said x-ray exposure; and

20   correcting each of said data set pixels with a correction value
            associated with the pixel corresponding thereto in the x-ray
            exposure, by adapting each correction value dependent on an
            accumulated x-ray dose to which a portion of the storage film
            containing the pixel corresponding to the data set pixel was
25   exposed, before acquiring said exposure of the subject.

6. (New) A method as claimed in 5, comprising correcting pixels $RB_{i,j}^m$ of the m-th x-ray image data set according to the following:

$$B_{i,j}^m = a * RB_{i,j}^m / EB_{i,j}^m,$$

5

wherein

a is a first scaling factor,

$RB_{i,j}^m$ is the signal of the pixel i, j of the m-th x-ray image data set,

10 $EB_{i,j}^m$ is the correction value for the pixel i, j of the m-th x-ray image data set and

$B_{i,j}^m$ is the signal of the pixel i, j of the m-th corrected x-ray image data set.

7. (New) A method as claimed in claim 6, comprising determining 15 the accumulated x-ray dose $D_{i,j}^m$ for a region of the storage film that is associated with the pixel i, j of the x-ray image data set according to the following relation for the m-th x-ray image data set:

$$D_{i,j}^m = \sum_{n=1}^{m-1} b * B_{i,j}^n,$$

20

wherein b is a second scaling factor.

8. (New)   A method as claimed in claim 7, comprising determining the correction value $EB_{i,j}^m$ for the pixel i, j of the m-th x-ray image data set according to the following relation:

5    $$EB_{i,j}^m = EB_{i,j}^0 - s * \left(\sum_{n=1}^{m-1} b * B_{i,j}^n \right),$$

wherein s is a constant and $EB_{i,j}^0$ is the correction value that is associated with the storage film without applied x-ray dose.